

The Relationship between Reinforcement Aspects, Work Atmosphere, and Job Satisfaction with The Job Performance of Early Childhood Education Teachers

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ABSTRACT: The aspects of reinforcement, work atmosphere, and job satisfaction are important factors that can influence teacher performance in formal educational institutions. This study aims to test the significance of simultaneous and partial correlations between the aspects of reinforcement, work atmosphere, and job satisfaction with teacher performance. The population of this study was 4,759 early childhood education teachers in Surabaya, East Java Province, Indonesia who had a minimum of two years of service and were actively working until 2025. The research sample of 210 teachers was determined using a purposive random sampling technique. Data on the aspects of reinforcement, work atmosphere, and teacher job satisfaction were collected using a Likert scale questionnaire with five answer choices: Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree, which had met the item validity test and the Alpha Cronbach reliability test, while teacher performance data were collected using a teacher performance assessment rubric instrument that had been tested by experts. The research data were analyzed using parametric linear regression statistical techniques, resulting in the simultaneous positive correlation between the reinforcement, work atmosphere, and job satisfaction aspects with the performance of early childhood education teachers. Partially, the reinforcement aspect was significantly positively correlated with the performance of early childhood education teachers. The work atmosphere aspect was not significantly correlated with the performance of early childhood education teachers. The job satisfaction aspect was significantly positively correlated with the performance of early childhood education teachers. The findings of this study imply that it is important for leaders of early childhood education institutions to provide reinforcement to teachers and implement school management that can create teacher satisfaction in an effort to improve the quality of early childhood education to support the development of superior human resources with global competitiveness.

KEYWORDS: assessment, human resources, quality, questionnaire

INTRODUCTION

Early childhood education is a crucial factor in developing human resources to achieve a developed country, meeting the United Nations' five key characteristics: high per capita income above USD 12,375, advanced technology, high-quality human resources, long life expectancy, and ensured national security (UNDP, 2025). Research shows that investing in early childhood education improves cognitive, social, and emotional development, promotes economic growth and competitiveness (Armendáriz et al., 2016; Reynolds et al., 2015), reduces inequality (Black et al., 2017), and strengthens social stability and national security (Atakpo, 2020; Lee et al., 2015).

Indonesia is a developing country committed to realizing high-quality human resources through the implementation of a quality, dignified, dynamic, and accountable national education system at the elementary, secondary, and higher education levels (Ministry of Education and Culture of the Republic of Indonesia, 2020). Early childhood education in Indonesia is positioned at the elementary education level, has a strategic role in shaping children's personality structure and building a strong foundation in the development of superior and globally competitive human resources (Aglesia et al., 2025). Early childhood education teachers hold the main key to improving the quality of early childhood education delivery, so it is necessary to manage crucial factors that can

encourage teachers to improve their performance (Sims and Waniganayake, 2015; Siraj et al., 2019). Among these crucial factors are aspects of reinforcement, work atmosphere, and job satisfaction (Crisci et al., 2019; Shi and Zheng, 2025).

This study examines the simultaneous and partial relationships between reinforcement, work atmosphere, and job satisfaction with early childhood education teachers' performance, which significantly affects education quality (Siraj et al., 2023; Hyseni et al., 2022). In Indonesia, teacher performance remains low (56%) and pedagogical competence is below average (50%) (Anggaeni & Yudha, 2024; Maryani, Yufiarti, & Yetti, 2021), indicating the need for improvement (Sum & Bora, 2023). Research shows that performance is influenced by self-efficacy, pedagogical competence, and professional well-being (Jang & Kim, 2024), as well as continuous professional development (Shi & Chen, 2026). Supportive work environments enhance performance, while incivility reduces motivation (Shin & Hur, 2020). Self-efficacy, shaped by training and relationships, and supportive resources are key to improving teacher performance (Dennee et al., 2024; Lai Mui Lee et al., 2017).

Reinforcement, work atmosphere, and job satisfaction are key aspects of early childhood education practices related to teacher performance and should be developed as a work culture (Arifin, 2015; Alsheeb et al., 2022; Rabbad et al., 2024). Reinforcement, such as rewards and praise from leadership, motivates teachers to perform tasks effectively (Martin & Pear, 2024). Studies show that organizational culture, achievement motivation, leadership, and positive work climate significantly enhance teacher performance and job satisfaction (Rachmadi et al., 2024). Compensation, intrinsic motivation, and professional development further strengthen performance through satisfaction and engagement (Puspita et al., 2024), while supportive environments promote sustained well-being.

Reinforcement includes rewards such as promotions, incentives, trust, and certificates; praise for teachers' knowledge, skills, responsibility, discipline, and behavior; and gifts such as valuables or housing. These forms of reinforcement motivate teachers and shape desired behavior based on B.F. Skinner's operant conditioning theory (Schlinger, 2021; Peterson, 2004). Research shows that verbal and tangible rewards foster positive learning environments (Ali et al., 2025), while reinforcement and shaping strategies effectively build skills through gradual behavior development (Krouska et al., 2018; Mitchell, 2014). Moreover, extrinsic rewards can stimulate long-term intrinsic motivation, highlighting the transformative role of reinforcement in education (Bardach & Murayama, 2025).

The work atmosphere is a work environment in the form of physical, social, and psychological conditions that influence individual work productivity (Dekawati, 2020; Benevene et al., 2020). The work environment in early childhood education institutions includes clean and beautiful physical conditions supported by conducive social and psychological conditions that can encourage teachers to carry out their duties creatively and productively (Puspita et al., 2024). Job satisfaction is an individual's response to reinforcement from leaders, the work atmosphere, and the performance they have achieved. The principal's leadership style, policies, and their implementation in the implementation of education in schools can influence teacher job satisfaction (Liu et al., 2026). The condition of teachers who feel satisfaction in their work, as indicated by prosperous attitudes and behaviors, will encourage teachers to improve their performance (Al-Abbasi & Shawsh, 2026). Conceptually, the theoretical framework of this research variable is outlined in figure 1.

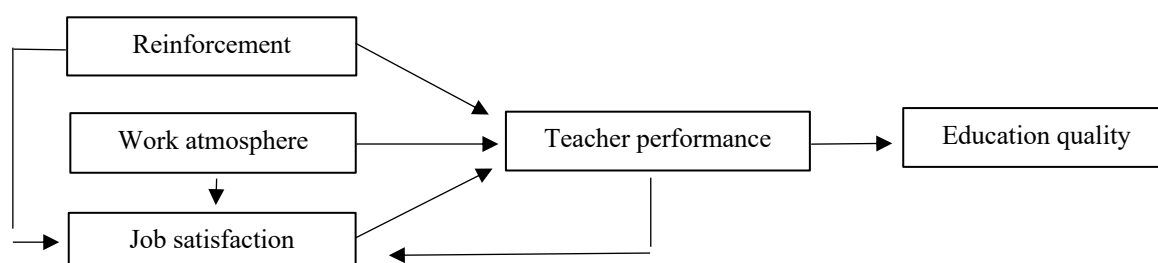


Figure 1. The Relationship between the Reinforcement Aspect, Work Atmosphere, Job Satisfaction, Teacher Performance, and the Quality of Education

Figure 1 shows that aspects of reinforcement, work atmosphere, and job satisfaction can influence teacher performance, while teachers with good performance will have a positive impact on the quality of early childhood education. Based on this study, the authors argue that this research needs to be conducted on early childhood education teachers, proposing the following hypothesis.

First hypothesis: there was a significant positive correlation between the reinforcement aspect and the performance of early childhood education teachers.

Second hypothesis: there was a significant positive correlation between aspects of the work atmosphere and the performance of early childhood education teachers.

Third hypothesis: there was a significant positive correlation between aspects of job satisfaction and the performance of early childhood education teachers.

Fourth hypothesis: there was a significant positive correlation between the aspects of reinforcement, work atmosphere, and job satisfaction together with the performance of early childhood education teachers.

The results of this study are expected to provide recommendations to school principals in efforts to improve teacher performance as a primary strategy to improve the quality of learning in early childhood education institutions.

MATERIALS AND METHODS

Study design and setting

This study used a correlational design aimed to simultaneously and partially test the significance of the correlation between aspects of reinforcement, work atmosphere, and job satisfaction with the performance of early childhood education teachers (Alshammari et al., 2023; Singh et al., 2024). Reinforcement (X1), work atmosphere (X2), and job satisfaction (X3) are each independent variables, while teacher performance (Y) is the dependent variable. The design diagram for this correlational study is outlined in figure 2.

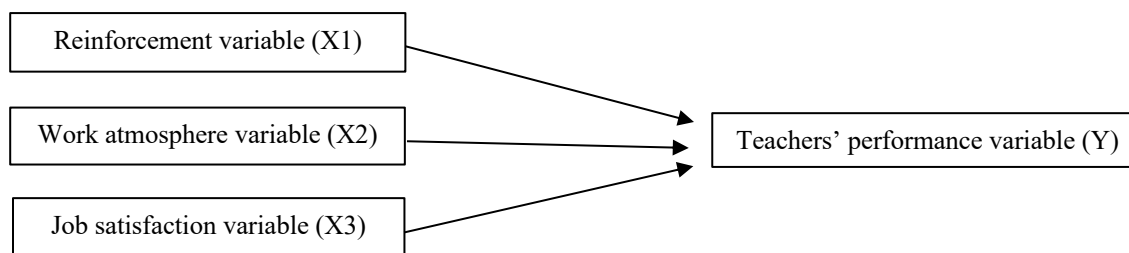


Figure 2. Correlational Research Design Diagram

Population and sample

The population of this study was 4,759 early childhood education teachers in Surabaya, East Java Province, Indonesia who met the qualifications, had a minimum of two years of service and were actively working until 2025. From this number of teachers, a random sample was taken using a purposive random sampling technique through the following procedures. First, 250 early childhood education institutions were randomly determined through a lottery technique. Second, a lottery was held to select a teacher from the 250 early childhood education institutions who met the research population qualifications. Third, requesting approval as research samples or respondents to the 250 teachers who stated that 210 teachers agreed, who were determined as the research sample.

Data collection and measurement procedures

Research data was collected using a Likert-scale questionnaire and an assessment rubric. The Likert-scale questionnaire provided five response options: Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree. This questionnaire was used to collect data on aspects of reinforcement, work atmosphere, and job satisfaction of early childhood education teachers through Google Forms (Robinson, 2024).

This questionnaire was developed by the authors using content validity and Cronbach's Alpha reliability procedures that were piloted on 98 early childhood education teacher respondents, which resulted in valid and reliable results (Almanasreh, et al., 2019; Johnson, 2021). A summary of the results of the Cronbach's Alpha validity and reliability tests is presented in table I.

Table I. Results of the Validity and Reliability Test of the Questionnaire

Number	Questionnaire	Number of items	Correlation coefficient of Product Moment Pearson	Cronbach's Alpha coefficient	Information
1	Reinforcement	17	0.180-0.592	0.821	Reliable
2	Work atmosphere	8	0.414-0.732	0.839	Reliable
3	Job satisfaction	14	0.256-0.594	0.827	Reliable

The reinforcement questionnaire measures three forms of reinforcement: awards, praise, and gifts given by leadership to teachers in their work units. The work atmosphere questionnaire measures the physical conditions of the teacher's workplace and the social conditions of their work, while the job satisfaction questionnaire measures teacher satisfaction with their ability to organize and develop learning programs, as well as teacher satisfaction with their ability to implement learning programs.

Teacher performance data was collected using an assessment rubric instrument developed by the authors and reviewed by three experts (Urios et al., 2025; Jönsson and Panadero, 2017). The results of the expert review served as the basis for revising the teacher performance assessment rubric. This assessment rubric is used by researchers to measure teacher performance by scoring learning program portfolio documents, learning implementation, evaluation of the learning process and learning outcomes, and implementation of guidance programs for early childhood education students.

Analytical methods

The research data, namely data on aspects of reinforcement, work atmosphere, job satisfaction, and work performance of early childhood education teachers, were analyzed using parametric regression statistical analysis techniques with the help of the IBM SPSS Statistics application program version 25 (Morgan et al., 2020). Before the research data were analyzed, a normality test was first conducted using the Kolmogorov-Smirnov method, and a linearity test for the relationship. The criteria used to test the normality of the data distribution are that the data is declared normally distributed if the significance value is > 0.05 , while the criteria for data to have a linear relationship if the significance deviation from linearity value is > 0.05 (Mishra et al., 2019; Feng, Li, and Song, 2025). The results of the normality test are presented in table II, while the results of the linearity test are described in table III.

Table II. Results of the Normality Test for the Distribution of Research Data Using the Kolmogorov-Smirnov Method

Number	Data	Test Statistic	Asymp. Sig. (2-tailed)	Information
1.	Reinforcement	0.053	0.200	Data is normally distributed
2.	Work atmosphere	0.048	0.200	Data is normally distributed
3.	Job satisfaction	0.054	0.200	Data is normally distributed
4.	Performance	0.050	0.200	Data is normally distributed

Table III. Results of Linearity Test of Research Data Relationship

Number	Data	Deviation from Linierity		Information
		F	Significance	
1.	Reinforcement with Performance	0.900	0.693	Linear relationship
2.	Work atmosphere with Performance	1.119	0.337	Linear relationship
3.	Job satisfaction with Performance	1.567	0.065	Linear relationship

Based on the results of the normality test of data distribution and the linearity test of the relationship as described in table II and table III, the research data on the aspects of reinforcement, work atmosphere, and job satisfaction are declared to meet the requirements for parametric regression statistical analysis.

RESULTS

Results of research data analysis

The results of the data analysis on aspects of reinforcement, work atmosphere, job satisfaction, and the performance of early childhood education teachers are described in table IV-VII.

Table IV. Descriptive Statistics

Number	Variable	Mean	Standard Deviation	N
1.	Performance	73.99	8.758	210
2.	Reinforcement	67.41	23.552	210
3.	Work atmosphere	19.08	4.490	210
4.	Job satisfaction	30.58	6.365	210

Table V. Partial Correlation of Reinforcement Aspects, Work Atmosphere, Job Satisfaction, with Teacher Performance

Number	Variable	Pearson Correlation	Product Moment	Asymp. Sig. (1-tailed)	Information
1.	Reinforcement	0.331		0.000	Significant
2.	Work atmosphere	0.056		0.208	Not Significant
3.	Job satisfaction	0.190		0.003	Significant

Table VI. Regression Correlation of Reinforcement Aspects, Work Atmosphere, Job Satisfaction, with Teacher Performance

Model	Sum of Squares	df	Mean Square	F	Sig	Information
Regression	1939.719	3	646.573	9.453	0.000	Significant
Residual	14090.262	206	68.399			
Total	16029.981	209				

Note:

1. Dependent Variable: Performance
2. Predictors: (Constant), Reinforcement, Work Atmosphere, Job satisfaction

Table VII. Effective and relative contributions of reinforcement, work atmosphere, and job satisfaction aspects to teacher performance in the regression model

Number	Variable	Standarized Coefficient (Beta)	Correlation coefficient	R Square (%)	Effective contribution (%)	Relative contribution (%)
1.	Reinforcement	0.302	0.331		9.9962	0.8267
2.	Work atmosphere	-0.006	0.056	12.0906	-0.0336	-0.0027
3.	Job satisfaction	0.112	0.190		2.128	0.1760

Hypothesis testing

First hypothesis

To test the first hypothesis, namely that there was a significant positive correlation between the reinforcement aspect and the performance of early childhood education teachers, the criteria used are that the alternative hypothesis (H_a) is accepted if the significance value (r) is 0.00-0.05 or significance ($r \leq 0.05$). The results of the data analysis obtained a calculated r value of 0.331 at a significance level of 0.000, which means significant. Thus, the first hypothesis, there was a significant positive correlation between the reinforcement aspect and the performance of early childhood education teachers, is accepted. This means that the



reinforcement aspect provided by the head of the early childhood education institution to the teachers significantly improves the teachers' performance.

Second hypothesis

To test the second hypothesis, namely that there was a significant positive correlation between aspects of the work atmosphere and the performance of early childhood education teachers, the criteria used are that the alternative hypothesis (H_a) is accepted if the significance value (r) is 0.00-0.05 or significance ($r \leq 0.05$). The results of the data analysis obtained a calculated r value of 0.056 at a significance level of 0.208, which means it is not significant. Thus, the second hypothesis, that there was a significant positive correlation between aspects of the work atmosphere and the performance of early childhood education teachers, is rejected. This means that aspects of the work atmosphere do not affect the performance of early childhood education teachers.

Third hypothesis

To test the third hypothesis, namely that there was a significant positive correlation between aspects of job satisfaction and the performance of early childhood education teachers, the criteria used are that the alternative hypothesis (H_a) is accepted if the significance value (r) is between 0.00-0.05 or significance ($r \leq 0.05$). The results of the data analysis obtained a calculated r value of 0.190 at a significance level of 0.003, which means significant. Thus, the third hypothesis, there was a significant positive correlation between aspects of job satisfaction and the performance of early childhood education teachers, is accepted. This means that the aspect of job satisfaction of early childhood education teachers can significantly improve their performance.

Fourth hypothesis

To test the fourth hypothesis, namely that there was a significant positive correlation between the aspects of reinforcement, work atmosphere, and job satisfaction together with the performance of early childhood education teachers, the criteria used are that the alternative hypothesis (H_a) is accepted if the regression significance value is between 0.00-0.05 or regression significance ≤ 0.05 . The results of the data analysis obtained an F value of 9.453 at a significance level of 0.000 which means significant. Thus, the fourth hypothesis, there was a significant positive correlation between the aspects of reinforcement, work atmosphere, and job satisfaction together with the performance of early childhood education teachers, is accepted. This means that together the aspects of reinforcement, work atmosphere, and job satisfaction can significantly improve the performance of early childhood education teachers.

DISCUSSION

Early childhood education is a crucial stage in personality development, laying the foundation for lifelong learning and behavior. According to Sigmund Freud's psychoanalytic theory, early childhood (birth to 5-6 years) represents a "golden age" for personality formation (Thompson, 2017). During this period, children develop essential cognitive, emotional, and social capacities that shape future outcomes. The quality of education is strongly influenced by teacher performance (Deding & Minnaert, 2024), which is shaped by internal and external factors manageable by school leaders (Kanya, Fathoni, & Ramdani, 2021). Therefore, effective leadership, proper training, and supportive systems are essential. Early childhood is a critical phase; thus, education quality depends heavily on teacher performance (Effendy Pohan et al., 2023), making teacher effectiveness a central determinant of educational success.

This study confirms that reinforcement and job satisfaction significantly influence teacher performance, highlighting their importance in educational management. Reinforcement, based on operant conditioning theory (Schlinger, 2021), effectively shapes behavior by encouraging desired actions. Positive rewards improve teacher performance, while punishment shows no significant effect (Permana, Irawati, & Setyaningsih, 2025). This suggests that supportive and motivational approaches are more effective than punitive measures. Leadership that applies reinforcement strategies enhances performance (Cruz, 2025), fostering a culture of appreciation and accountability. Furthermore, consistent reinforcement improves overall education quality by maintaining teacher motivation and engagement (Cruz et al., 2018; Khalid, Rahum, & Khalid, 2021), ensuring that teachers remain committed to delivering effective and meaningful learning experiences for children.

Empirical evidence further shows that reinforcement and job satisfaction have stronger impacts than work environment factors (Ruiz-Calzado & Villacreses-Cantos, 2025). Organizational culture, recognition, and achievement motivation significantly improve performance (Martin et al., 2024), indicating that psychological and social factors are crucial. Job satisfaction directly



affects teacher performance (Zhao & Jeon, 2024), increasing commitment, discipline, and motivation (Saragih et al., 2025; Khaira, Yusrizal, & Niswanto, 2022), supported by findings from Ahiri et al. (2023). Satisfied teachers are more engaged and productive in their roles. It also acts as a mediator between motivation and performance (Ingsih et al., 2017), meaning that improving satisfaction can amplify the effects of other motivational factors on teacher effectiveness and overall educational quality.

Supportive leadership, compensation, and professional development strengthen performance through job satisfaction (Puspita et al., 2024). These elements help teachers feel valued and motivated in their professional roles. Social reinforcement such as respect, recognition, and clear roles plays a crucial role in sustaining teacher engagement (Farewell et al., 2022). Reward strategies, both intrinsic and extrinsic, significantly enhance engagement and performance (Ali et al., 2025), while incentives and recognition sustain motivation over time (Dlamini, 2026). Transformational leadership further improves performance through motivation and satisfaction (Virgana & Fitriani, 2025; Hardianto et al., 2025), emphasizing the importance of visionary and supportive leaders in creating a positive and productive educational environment.

Although the work environment contributes to job satisfaction, its direct effect on performance is relatively small (Ker et al., 2022; Leonor et al., 2023). School culture and supportive climates improve satisfaction and retention (Xia et al., 2023; Rachmadi et al., 2024), but physical environment factors have limited influence on actual performance outcomes. Teachers' intrinsic motivation, adaptability, and focus on student interaction reduce dependence on environmental conditions (Wagner & French, 2010; Blewitt et al., 2021; Chen, 2023). Work engagement is more strongly influenced by self-efficacy and professional support than by environment (Lipscomb et al., 2022), while leadership reinforcement remains a key predictor of effectiveness (Chen & Fan, 2026), reinforcing the central role of internal and leadership-driven factors.

The results of the multiple linear regression analysis indicate that the reinforcement, work atmosphere, and job satisfaction aspects significantly influence the performance of early childhood education teachers. The effective contribution of the reinforcement aspect to teacher performance is 9.9962%. The effective contribution of the job satisfaction aspect to teacher performance is 2.128%, while the effective contribution of the work atmosphere aspect to teacher performance is -0.0336%, meaning it does not contribute to improving teacher performance, so that the work atmosphere variable has empirical reasons to be excluded from the multiple linear regression model. The implications of the results of this study, in the career development of early childhood education teachers (Hartono and Pravesti, 2023) the reinforcement and job satisfaction aspects are important factors that need to be managed professionally by the leaders of early childhood education institutions, so that teacher performance can be improved in an effort to improve the quality of early childhood education.

CONCLUSION

Early childhood education plays a crucial role in shaping a child's personality structure, thus requiring attention from educators, particularly leaders of early childhood education institutions, teachers, and parents. This study involved 210 teachers as a representative sample of 4,759 early childhood teachers in Surabaya, East Java Province, Indonesia. The purpose of this study was to examine the significance of simultaneous and partial correlations between aspects of reinforcement, work atmosphere, and job satisfaction with the performance of early childhood teachers. To achieve this goal, the researchers employed a correlational research method. Data on aspects of reinforcement, work atmosphere, and job satisfaction of early childhood teachers were collected using a Likert scale questionnaire instrument that met content validity and Cronbach's Alpha reliability developed by the researchers with 5 answer options: Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree. Early childhood teacher performance data were collected using a performance assessment rubric instrument that had been expertly tested, thus meeting the feasibility of scientific data collection methods.

After analyzing the data using parametric linear regression statistical analysis techniques, the results showed that the aspects of reinforcement, work atmosphere, and job satisfaction simultaneously was a significant positive correlation with the performance of early childhood education teachers. Partially, the reinforcement aspect was significantly positively correlated with the performance of early childhood education teachers. The work atmosphere aspect was not significantly correlated with the performance of early childhood education teachers. The aspect of job satisfaction was significantly positively correlated with the performance of early childhood education teachers.

The findings of this study indicate that the aspects of reinforcement and job satisfaction are important factors that can empirically improve the performance of early childhood education teachers, so it is recommended that leaders of early childhood

education institutions in an effort to improve the quality of education, need to provide professional reinforcement to teachers and implement school management that can create job satisfaction for teachers who work in the early childhood education institutions they lead.

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